thresholds (32,6% of the patients) required a DXA measurement to verify the diagnosis of osteoporosis. Cost-effectiveness was assessed in five patient cohorts: women (BMI 24 kg/m^2) aged 65 years with previous fracture and 75 or 85 years with and without previous fracture. **RESULTS:** Among the cohorts modeled, the average screening cost saved with Bindex® including proposed pathway in comparison to current guideline pathway were around €230/patient. At a cost of €50/screen, the probability that the pathway including Bindex® was cost-effective compared to the current pathway was 100% in all patient cohorts. Bindex® including pathway appeared to be cost-effective at prices as high as €100/screen. **CONCLUSIONS:** Bindex® including pathway appears to be cost-saving strategy compared to the current and recommended Finnish osteoporosis diagnosis and care pathway.

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A MODEL OF THE COST EFFECTIVENESS OF INFLIXIMAB FOR THE TREATMENT OF SEVERELY ACTIVE ULCERATIVE COLITIS, IN CHILDREN AND ADOLESCENTS AGED 6 TO 17 YEARS, WHO HAVE HAD AN INADEQUATE RESPONSE TO CONVENTIONAL THERAPY

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OBJECTIVES: To evaluate the cost-effectiveness of Infliximab (IFX) treatment in severe, active paediatric ulcerative colitis (pUC). **METHODS:** A Markov model was constructed based upon the literature, to model the progression of a cohort of pUC patients treated with IFX and ciclosporin (CIC) used off-label in the rescue therapy setting. The transition probabilities were estimated from the IFX phase III trials (T72, ACT1 and ACT2). The comparative efficacy was incorporated by using the odds ratio for IFX *vs.* CIC from a head to head trial in adults (Laharie *et al*). Utility weights from observational studies (SOLUTION and Arseneau *et al*) were assigned to the health states within the Markov process. Incremental cost-effectiveness ratios (ICERs) were estimated with a one year time horizon. Uncertainty around key variables was explored through deterministic sensitivity analysis. **RESULTS:** Compared to CIC in the rescue therapy setting, IFX was a dominant treatment option (produced more QALYs at a lower cost). The results were sensitive to the number of days patients were hospitalised for each treatment, the comparative rates of adverse events and altering the odds ratio for comparative effectiveness. **CONCLUSIONS:** IFX is a highly effective and well-tolerated therapy for the treatment of paediatric patients with severely active ulcerative colitis. IFX is the only biologic treatment licensed for this population, and is cost-effective when compared to the commonly used off-licence treatment CIC.

PMS59

COST-UTILITY OF RHEUMATOID ARTHRITIS MONOTHERAPY WITH TOCILIZUMAB IN SPAIN

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OBJECTIVES: Analyze Tocilizumab (TCZ) monotherapy cost-utility for moderate/severe rheumatoid arthritis in patients who are intolerant/contraindicated to MTX, compared with two standard treatment sequences: comparison 1: Etanercept-Adalimumab-Certolizumab-Support treatment vs. Tocilizumab-Etanercept-Adalimumab-Support treatment, and comparison 2: Adalimumab-Etanercept-Certolizumab- Support treatment vs. Tocilizumab-Adalimumab-Etanercept-Support treatment. **METHODS:** A life time micro-simulation model with 6 months cycles was performed in order to calculate the incremental cost-effectiveness ratio of the TCZ treatment sequences vs. standards sequences, which were determined by an expert panel of Spanish rheumatologists. Demographic data on age, HAQ score and sex were obtained from the ADACTA trial, while body weight data was obtained from the PRAXIS study. The efficacy data (ACR clinical response) were obtained from the pivotal clinical trial of each drug. Utilities were calculated from the relationship between ACR response, HAQ score and EQ5D instrument, according to the VACAR study, conducted in the Spanish population. The analysis was done from National Health System (NHS) perspective. Unit costs (€; 2012) were obtained from Spanish sources. Annual discount rate was 3.5% for costs and outcomes. Probabilistic sensitivity analyses were performed. **RESULTS:** TCZ sequences generated more costs per patient than the standard sequence (€ 7,107 in comparison 1; € 6,087 in comparison 2). However, the TCZ sequence generated more QALYs than the standard sequence (0.330 in comparison 1 and 0.297 in comparison 2). The cost of gaining a QALY with TCZ sequences versus the standard sequence was € 21,529 (comparison 1) and € 20,496 (comparison 2). According to probabilistic sensitivity analyses, the probability that the TCZ sequences are cost effective is 86.8% for the comparison 1 and 86.1% for the comparison 2. **CONCLUSIONS:** In both comparisons, the analysis results indicate that the inclusion of TCZ monotherapy as first-line represents an effective and cost-effective alternative in Spain versus the current sequences used for the treatment of patients with rheumatoid arthritis and MTX intolerance/contraindication.

PMS60

COST-UTILITY ANALYSIS OF TOCILIZUMAB MONOTHERAPY VERSUS STANDARD OF CARE FOR THE TREATMENT OF RHEUMATOID ARTHRITIS IN GREECE

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OBJECTIVES: Rheumatoid Arthritis (RA) is a chronic, inflammatory disease affecting 0.68% of the adult population in Greece. RA is associated with a lowered quality of life and a serious economic burden. This study aims to evaluate the cost-effectiveness of adding tocilizumab to a treatment sequence for patients with active RA, who had an inadequate response to one or more traditional disease-modifying antirheumatic drugs (tDMARDs) and are intolerant or contraindicated to methotrexate (MTX). **METHODS:** A patient-level simulation model was applied to project lifetime costs and outcomes for 10.000 patients from a payer's perspective. The analysis compared a standard treatment pathway (STP) (adalimumab, etanercept and palliative care) with a similar pathway initialized with tocilizumab (TCZ). Disease severity was reflected by Health Assessment Questionnaire (HAQ) scores. As primary efficacy outcomes, American College of Rheumatology (ACR) response rates were used. Patient characteristics (age, gender and baseline HAQ score) and TCZ efficacy data were derived from the ADACTA trial, whereas efficacy data for the remaining DMARDs were derived from a network meta-analysis of each medication's trial outcomes. A mapping model transformed HAQ scores into QALYs. Clinical practice standards were defined by an expert panel of Greek Rheumatologists. Costs for pharmaceuticals and resource unit costs were obtained from official (Social Insurance) price lists. A discount rate of 3% was used for both costs and QALYs. **RESULTS:** Results indicate that a treatment sequence starting with TCZ yields 1.17 more QALYs (9.38 vs. 8.21) for an additional cost of €33,145 (€125,409 vs. €92,264) compared to the STP. The Incremental Cost – Effectiveness Ratio (ICER) was 28,325.5€/QALY gained. Sensitivity Analysis confirms robustness of findings below a threshold of €45.000. **CONCLUSIONS:** The results of the analysis suggest that TCZ as a first-line biologic drug can be a cost-effective treatment option for the management of active RA in patients intolerant or contraindicated to MTX.

PMS61

HEALTH ECONOMIC MODELLING OF SEQUENTIAL THERAPIES FOR RHEUMATOID ARTHRITIS: A SYSTEMATIC REVIEW

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OBJECTIVES: A systematic review was conducted to: 1) Identify economic evaluations of therapies for rheumatoid arthritis (RA), and 2) assess and critique how sequential therapies were modelled and evaluated. **METHODS:** Systematic searches of ten databases were undertaken to identify published economic evaluations of disease modifying therapies for RA. Searches were undertaken in February 2013, with no date restriction. Studies were included if they reported a full comparative economic evaluation. Identified studies were appraised using the Drummond economic evaluation checklist. Data extracted included economic evaluation data, along with data relating to sequential treatments. Data on the modelling methods used were also extracted, to identify how data sources were synthesised. The systematic review was conducted to the PRISMA standards. **RESULTS:** Fifty-seven studies were identified. 43 (75%) were cost-utility analyses. 11 (19%) had a UK perspective, and 11 (19%) had a US perspective. The remainder were mainly undertaken within Europe (26 (46%) studies). There was a distinction between studies in recent-onset RA (14 (25%)), and those in established RA (42 (74%)). One study (1%) was unclear. The review identified approximately 30 RA treatments. Using individual level modelling was associated with improved quality of the evaluation and the ability to evaluate sequences. Reporting about the impact of future treatments on costs and health benefits was poor. When downstream treatments were modelled, the evidence used was often poorly reported. No study considered identifying the optimal sequence of treatments given a set of alternative treatments. Where models have been developed that consider a lifelong time horizon and downstream treatment sequences, evidence gaps were identified. **CONCLUSIONS:** The review has identified that methods have not been consistently applied, which has led to varied estimates of cost-effectiveness. Sequences of treatments have not been appropriately considered and modelled, potentially biasing estimates of cost-effectiveness.

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COST-UTILITY ANALYSIS OF TOCILIZUMAB IN COMBINATION WITH METHOTREXATE VERSUS STANDARD OF CARE FOR THE TREATMENT OF RHEUMATOID ARTHRITIS IN GREECE

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OBJECTIVES: Rheumatoid Arthritis (RA) is a chronic, inflammatory disease affecting 0.68% of the adult population in Greece. RA is associated with a lowered quality of life and a serious economic burden. This study aims to evaluate the cost-effectiveness of adding tocilizumab to a treatment sequence on a background of methotrexate (MTX) for patients with active RA, who had an inadequate response to one or more traditional disease-modifying antirheumatic drugs (tDMARDs). **METHODS:** A patient-level simulation model was applied to project lifetime costs and outcomes for 10.000 patients from a payer's perspective. The analysis compared a standard treatment pathway (STP) (Adalimumab, Etanercept, Abatacept and Palliative care along with MTX) with a similar pathway initialized with Tocilizumab (TCZ). Disease severity was reflected by Health Assessment Questionnaire (HAQ) scores. As primary efficacy outcomes American College of Rheumatology (ACR) response rates were used . Patient characteristics (age, gender and baseline HAQ score) and drug efficacy for TCZ were obtained by an analysis of pooled data from three phase-III clinical trials. Efficacy data for comparators were derived from indirect comparisons. A mapping model transformed HAQ scores into QALYs. Standards regarding clinical practice were defined by an expert panel of Greek Rheumatologists. Costs for pharmaceuticals and resource unit costs were derived from official (Social Insurance) price lists. A discount rate of 3% was used for costs and QALYs. **RESULTS:** Results indicate that a treatment sequence starting with TCZ yields 0.79 more QALYs (11.68 vs. 10.89) for an additional cost of €21,174 (€168,963 vs. €147,788) compared to STP. The Incremental Cost – Effectiveness Ratio was 26,686€/QALY gained. Sensitivity Analysis confirms robustness of findings below a threshold of €45.000. **CONCLUSIONS:** The results of the analysis suggest that TCZ, combined with MTX, as a first-line biologic drug can be a cost-effective treatment option for the management of active RA compared to STP.